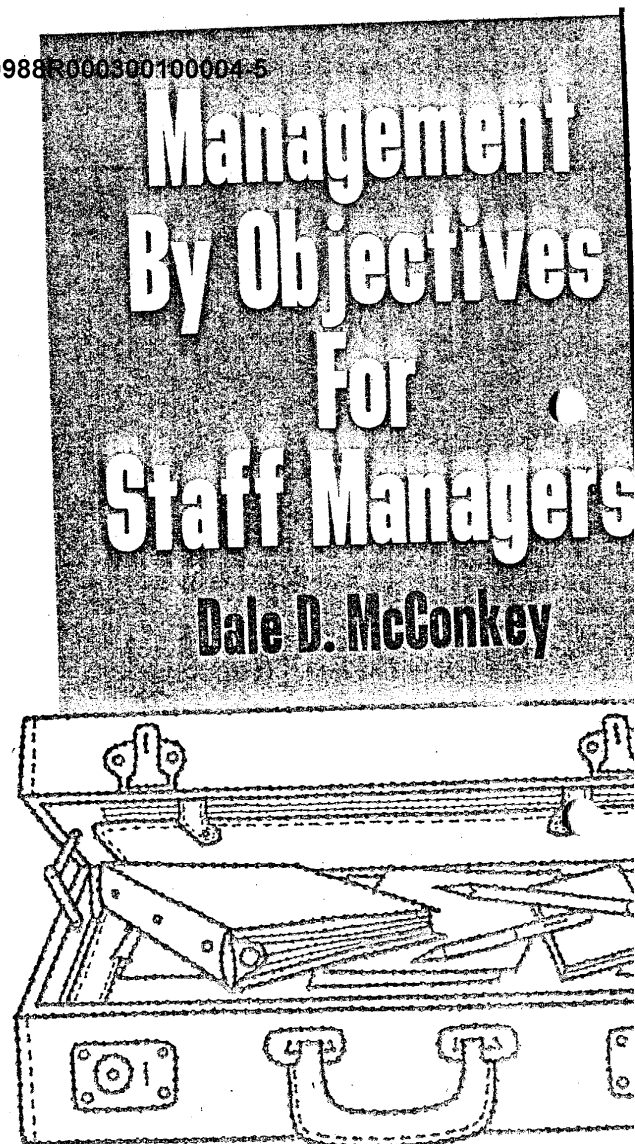
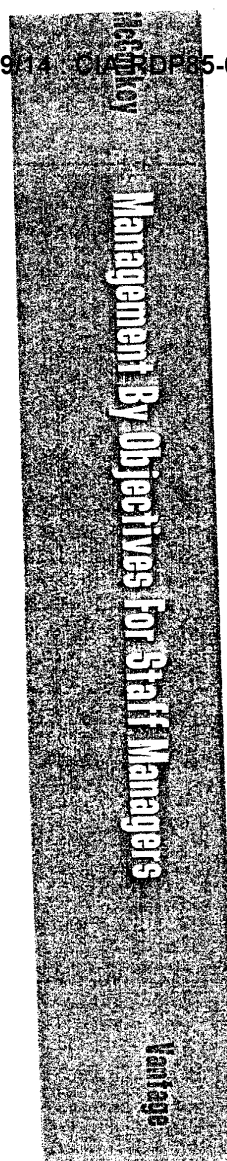




About the Author

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of the new equipment over the old; the financial worth of these advantages; and, the return on investment for the \$400,000.

Assume a production manager walks into his boss' office and asks for \$400,000 to buy new equipment; he tells his boss that it is impossible to determine or measure what return the organization will receive on its two-fifths of million dollars of investment. The reader can imagine what would happen in his particular organization. In the first instance, no production manager worth his salt would even make such a request. In the second instance, and in the unlikely event he did, his request would be turned down out of-hand and his name would be moved to the bottom of the promotion list. If the company continued to retain him in employment, he would probably spend his next few weeks attending classes on basic business techniques for the student manager. Yet, a company is guilty of exactly this when it approves the same expense for staff managers who have objectives or responsibilities which are considered incapable of being measured.

The indictment that staff objectives could not be measured was valid prior to MBO because prior to MBO these objectives, at best, were "for motherhood and against sin" types of objectives. They often read as follows:

1. To attain and maintain the highest possible degree of quality (for a quality control manager).
2. To provide expert financial and accounting advice (for a financial manager).
3. To design a product of the greatest consumer appeal at the lowest cost of production (for a design engineer).
4. To formulate and recommend programs which will promote employee interest and morale (for a personnel manager).
5. To purchase raw materials and supplies in accordance with specifications (for a purchasing manager).

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Chapter VIII

WRITING MEASURABLE STAFF OBJECTIVES

The paramount difficulty in writing staff objectives is overcoming the long-practiced misconception that they cannot be measured—not in writing measurable objectives. Under MBO they can and must be measurable. To admit otherwise would be tantamount to agreeing that 20 to 40% of the average company's manpower budget is being expended on staff functions which can't be measured and that companies therefore must rely upon some form of divine guidance to make certain they are receiving value due for these tremendous expenditures. It should suffice to say that a company would be extremely reluctant to approve such amounts for any other type of project without first determining the rather finite measurements by which its return on investment would be gauged. Take for example an organization whose "general and administrative expense" budget, exclusive of items such as interest on debt and other non-manpower items, approximates \$2 million—a not uncommon situation. Further assume the percentage of staff costs of this figure is only 20 per cent. Thus, we are talking about a cost of \$400,000 for the costs of staff managers and the matters for which they recommend, secure approval and ultimately control. Now, this expenditure of \$400,000 will be relabeled to change its cost classification and to illustrate the measures which would be required if it were, for example, a request for new equipment.

Before the company approved the expenditure it would want to know, at the very minimum: the details of how, when and for what the money would be used; the advantages

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6. To advise and counsel the company's managers in the preparation of both short and long-range plans as an aid in achieving the company's objectives (for a planning manager).
7. To support the production department by providing well thought out recommendations on matters such as operational layout, work flow, and manufacturing processes (for an industrial engineering manager).
8. To enhance the company's image in the eyes of the buying public by securing the placement of publicity favorable to the company in media such as newspapers, magazines, radio and television (for a public relations manager).

Determining Staff's Mission

The staff manager must give considerable thought to his true mission in the organization before he can write worthwhile objectives. The failure of the staff manager to make this determination usually will result in his compiling a list of routine activities which he plans to pursue. For example, the true mission of an advertising manager is not to formulate and administer advertising programs; his real job is to help generate sales by the type, manner, and cost of the advertising effort he completes. In similar fashion, the mission of the research manager is not to spend money carrying out research activities but to add to sales and profits by developing new products or improving old ones. An industrial engineer's job is not to conduct efficiency studies but to help increase production output. The major difference in all three of these examples is the distinct demarcation which must be established between merely pursuing activities and achieving specific results. Two examples will illustrate the importance of this difference for a staff engineering manager.

In the first example, the engineering manager considers his mission as being "to provide engineering services to the

operating divisions." When he writes his so-called objectives he will undoubtedly end up with a lengthy list of activities designed to carry out his mission; it would be all but impossible to arrive at any other type of objectives because he has cast his mission as an activity. In the second example, the engineering manager states his mission in terms of the results he must achieve to justify his existence. His mission states that he is accountable for "effecting savings in plant and equipment costs through achieving X, Y and Z results." An actual engineering objective covered by the second example reads as follows:

"Reduce design engineering and manufacturing cost ratio to total equipment and rebuild cost from present 17.3% to 15% without reducing quality of design and manufacture of equipment."

Thus, before staff managers can consider writing meaningful, measurable objectives, they must arrive at an understanding of their true mission. The failure to do so will result in objectives which are not specific and not responsive to the real needs of the organization.

Qualitative to Quantitative Objectives

Prior to the extensive use of MBO it was usually believed, and practiced, that line managers should have quantitative objectives, i.e. those dealing with numbers such as sales figures, cost levels, ratios, return on investment, quotas, and profits. It was assumed, and widely practiced, that staff managers who dealt in intangibles could not have quantitative objectives but only qualitative ones in which the manager tried to state as specifically as possible that which he was going to accomplish. Even though it is still necessary for the staff manager to rely sometimes on specific, qualitative objectives, staff objectives are moving more and more to the quantified

type. Following are two examples which illustrate the movement from qualitative to quantitative type objectives. The first one is a general corporate objective; the second is a specific staff objective:

Example 1, a general corporate objective. Companies have long appreciated the value of having a quality reputation for their products. It builds customer confidence, sales, and profits. Thus, companies frequently established an objective dealing with product quality. It usually reads along the following lines:

"Our objective is to achieve the number one quality reputation for our company within the industry."

At best, this was a qualitative type of objective and, while highly laudable, it could not be measured. No definition of quality had been agreed to and it was not possible to determine when or if the objective ever was reached. It was a "for motherhood" type of objective. Before it could become a meaningful objective in accordance with MBO it was necessary to define what the objective meant and how it was to be measured. The period of roughly the last eight years has seen organizations make dramatic strides in solving both the definition and measurement problems. This was accomplished by including in the objective *those specific conditions or indicators which must be met when in the judgment of management the objective had been satisfactorily accomplished.* Using this technique, the preceding quality reputation objective is now restructured as follows:

Our objective is to achieve the number one quality reputation for our company in the industry. This objective will be accomplished when:

1. The number of field service calls does not exceed X per cent.
2. The in-plant reject rate is X per cent or less.
3. Warranty costs are less than X per cent of sales.

4. Labor and materials cost for rework does not exceed X per cent.

5. The company's product is rated in the first two positions for at least eight out of ten times in the monthly issues of CONSUMER HIGHLIGHTS magazine.

This objective, which always was one of the most nebulous ones, now is a very specific one which can be measured quite readily. Managers know what must be done to accomplish the objective and at the end of the target period they will know whether or not they have accomplished it.

Example 2, for a staff manager. Now, the same procedure as illustrated in the preceding example will be applied to a personnel manager's accountability for training and development. His mission is not to "conduct training and development programs," but to actually train a certain number of employees according to standards which will achieve certain specified results.

Prior to MBO, this manager's qualitative objective probably read:

To formulate and conduct training programs to insure the availability of trained personnel to meet the company's manpower requirements.

As was the case in the preceding example, this objective suffers from the lack of definition as to what was meant and some method of measuring whether or not it is accomplished. It moves from qualitative to quantitative status when it is restructured as follows:

To meet manpower requirements of the company by formulating and conducting training programs which will achieve the following results:

1. A replacement has been trained and is qualified for promotion for each job at Salary Level 15 or above.

2. Three graduate mechanical engineers are capable of promotion to the Senior level.
3. Twelve foremen have completed and achieved a grade of 80 or better in the course, Basic Supervisory Techniques for Foremen.
4. At least 4 stationary engineers have completed the necessary training and have secured the license for First Class.
5. Twenty clerk-typist trainees have completed typing Course A and are able to type copy at the rate of at least 50 words per minute.

Here again, this objective illustrates how a general, qualitative one can be highly quantified and made into a meaningful, measurable objective. This procedure will be illustrated further with a few brief examples for other staff managers.

Credit Manager—This manager's true mission is to generate increased sales through the manner in which he extends credit and collects accounts receivable. Both of these functions can exert a significant impact on profits. If he is too strict when approving credit, he can cost the company increased sales. On the other hand, a larger amount of bad debts may result if credit is extended too loosely. He can cost the company money which it could earn from interest if collections are not made on time. Thus, the conditions which he must meet, to adequately perform his job, might be spelled out as follows:

The credit manager will have performed his job in a satisfactory manner when:

1. Credit limits have been established for all accounts.
2. Credit applications are approved or disapproved within two days of receipt in 98% of the cases.
3. Accounts receivable are collected within 30 days for 60% of outstanding receivables and 45 days for 38% of receivables.
4. Bad debts do not exceed two per cent of sales for the year.

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5. No loss of sales results from the above.

Development Engineering Manager—The qualitative objective for this manager usually would dwell upon his responsibility for designing and developing products and processes. His true mission is to enhance profits by the manner in which he runs his function and his profit contributing role is clear when spelled out as follows:

The manager of development engineering will have performed satisfactorily during 1972 when he achieves the following results:¹

1. Development costs are within a plus or minus 5% of budget for 98 per cent of projects.
2. At least three new products reach the commercial stage and each achieves the sales and returns specified by company policy.
3. Savings of at least \$50,000 are realized through the improvement of present products. These savings may result from reductions in labor, materials or equipment.
4. Move Project A to a position where a "go" or "no go" decision may be made by September 1.

In summary, often a staff objective can be changed from a qualitative type to a quantitative one by first deciding the specific result which is desired and then listing or describing the specific conditions which will have been met when management considers the requirements of the objects to be satisfied.

Chapter IX contains additional examples of these and other forms of staff objectives

1. Many development projects require more than one year to reach fruition and usually the objective covers more than the one year period used in this illustration.

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Making Objectives Specific

Although it is desirable to quantify staff objectives as much as it is prudent to do so, it is not always possible or prudent to insist upon complete quantification.

In terms of being prudent, it is more worthwhile to the company to approve an objective of considerable importance even though the objective can be quantified to a lesser degree than it is to approve an objective of lesser worth which can be quantified to a greater degree. Assume for example, a financial manager having responsibility for financial forecasting and forms control. It is more difficult to quantify an objective covering financial forecasting than one covering forms control. If the company insists upon extensive quantification, the financial manager might be prone to recommend an objective, and a highly quantified one, which provides he will reduce the cost of printing forms by 5%. He doesn't recommend one for financial forecasting because it would be more difficult to structure. The insistence on extensive quantification, in this example, has cost the company money as the savings from not printing forms may have equaled a few hundred dollars while the loss through not pushing improved financial forecasting may have cost thousands of dollars or more. The same reasoning is applicable in the instance of a personnel manager who recommends an objective to reduce by X mills the unit cost of paper cups in the cafeteria but doesn't recommend an objective covering a much needed compensation plan because the latter is more difficult to quantify.

Nor is it always possible to completely quantify staff objectives. To insist upon complete quantification in those instances in which it is not possible will not result in better objectives but it will result in much wasted effort by staff managers as they try to do the impossible and their faith and value in the MBO system will suffer. Like many facets

of the management process, there are no clean cut and ironclad rules as to the dividing line separating overquantification from lack of quantification. This is a matter which each organization and its managers must decide. However, there are a few proven ground rules which, when followed, will help to make any objective more specific in terms of definition and measurability.

Results Not Activities—Staff managers can improve their objectives appreciably by wording the objective in terms of the result they plan to achieve rather than the activities which they will engage. It is far better to describe results even though the result itself may not be capable of one hundred per cent accuracy in definition, than to talk about activities. Examples of both are:

Activity—To conduct market research studies
improve the sale of company products.

Result—To select by July 1 three test markets for testing new Product B.

Who, What and When—Another technique for making objectives more specific is to make certain they include a clear statement of what is going to be accomplished, who is going to accomplish it, and when it is going to be accomplished. These are the three salient points of any delegation and should certainly be included in the objectives of an MBO system which essentially is a system for delegating the responsibility for results through all levels of management.

Avoid Relative Terms—There is a tendency, especially concerning staff objectives which cannot always be quantified completely, to lapse into the expediency of using relative terms to describe results. Words such as adequate, sufficient, and reasonable, are poor substitutes for more descriptive ones; they lead to countless misunderstandings and make measuring practically impossible. Consider the word "sufficient." What does it mean? Does it mean the same to all people? Can the magnitude of results be measured? Is it a

sufficient standard against which to reward or discipline a manager? Can it be used to prepare a financial plan?

All relative terms should be replaced with more precise ones even though the more precise words still may fall short of complete precision. For example, instead of using the relative word "reasonable," state the result within parameters; even wide parameters are preferable to the relative word. Examples:

Poor—To achieve a *reasonable* improvement in the time required to prepare and distribute the Monthly Report of Operations.

Better—To reduce by 5 to 15% the time required to prepare and distribute the monthly report of operations.

Poor—To effect as much reduction as *possible* in the cost of operating the Law Department.

Better—To reduce the cost of operating the Law Department by 10 to 30%.

Poor—To direct the quality assurance function in a manner *sufficient* to meet anticipated needs.

Better—To improve product quality by recommending inspection procedures designed to detect 80% of substandard products.

The reader will note that none of the alternatives listed under "better" are perfect; however, they are infinitely more valid as objectives than the ones which included relative terminology. The staff manager can improve all of them by continually zeroing in on the specific results he wants to achieve.

One Objective for All

Every staff manager has one possible objective which he should consider everytime he submits objectives for his department.

ment. It involves the one line responsibility he has—namely, the efficiency with which he runs his own department.

MBO contemplates continual improvement, year in and year out. The continual improvement requirement applies to the manner in which the staff manager performs for other departments and also to the internal direction of his department. Subject matter for some of his internal efficiency objectives include: operating his department with fewer personnel; improving the quality of his personnel; operating at reduced costs in terms of office space, equipment, and supplies; and increasing the output of his department.

The line manager increases his return on investment when he produces more on his investment base or when he produces the same amount on a reduced investment base. The staff manager has the same opportunity in the objectives which he recommends for the internal operation of his department.

obvious and repetitious objectives such as "operate within budget limits" have not been included. The various objectives illustrated under each function are not the objectives for any one particular job; the objectives are for many different jobs in different organizations.

Finance

1. Realize a minimum profit improvement of 1 per cent on short term investments (less than 6 months) and one half per cent on long term investments (6 months to 2 years) based on the average funds available for investing on the first day of each month.
2. To hold dues and subscription expense to \$950 for the fiscal year ending April 30, 1972.
3. To increase earned discount to .45% of accounts payable payments (exclusive of freight payments) for the fiscal year ending April 30, 1972.
4. Reduce preparation time required by corporate directors by 40% through providing them with Monthly Financial Analysis Report which contains comprehensive statement of deviations from overall corporate objectives, reasons for the deviations and recommendations for compensating for deviations.
5. Limit sundry administrative expense to \$3,400 for the fiscal year ending April 30, 1972.
6. Total office supplies expense not to exceed \$3,000 for the fiscal year ending April 30, 1972. To obtain lower cost on one stationery supply item each month during the fiscal year ending April 30, 1972. The lower cost not to be obtained through quantity purchase.
7. Recommend and install a Standard Costs Program by April 15 which will:
 - A. Establish cost standards for the shipping and packaging departments.

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Chapter IX

STAFF OBJECTIVES BY FUNCTIONS

A key requirement of effective staff objectives is that they be closely tailored to the circumstances existing in the organization during the period during which the objectives will be carried out. This tailoring includes the requisites that the objectives be aimed to results which are compatible with and required by the overall objectives of the organization and the objectives of the other departments which the staff manager is responsible for supporting. It also requires staff objectives to address themselves to priority matters. Any attempt to practice "copycat management" will meet with failure as it is not possible to lift successful objectives out of the experience of one company and place them in practice in another organization. For example, a cost reduction objective which would be perfectly proper for an industrial engineer in a company having as its major objective an across the board reduction in costs might be completely at variance with the needs of another company having expansion as its main goal.

The objectives included in this chapter are examples only. They are not intended as objectives which can be summarily adopted and implemented in an organization. They are intended to provide illustrations of the form and content which staff managers in many different organizations have followed when structuring their objectives.

This chapter presents only the objectives and not the plans which must accompany each objective and in which the manager spells out the concrete steps which he will pursue to make certain the objective is achieved. The plans part of the MBO system are covered in Chapter X. Also,

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B. First line foremen will receive performance reports within 3 days.

C. Reasons for deviation from standard will be furnished to superintendents within 2 days after conclusion of B, above.

8. Revise cost result to contain additional information requested by works manager by consulting with works manager to be sure of all information needed. Draw up revised draft of cost form for his approval by February 15. Have new forms printed by March 15.

9. By July 1, submit a "make or buy" recommendation on the company's data processing division detailing justification for continuing division within company versus going to an outside service. Recommendation to hinge on:

A. Comparison of costs to company.

B. Speed and quality of output.

C. Probable company requirements with next 10 years.

D. Reliability of outside service bureau.

10. Develop and recommend by February 1, a program for maintaining and continuing the orientation of all third level, and above, financial personnel in the operational aspects of the company's business.

For examples on other finance objectives, see pages 43, 82, 106, 110, 131, 135, 137, 138, 155, and 161.

Engineering

1. To pick one maintenance part item each month and find a way to reduce the cost of that part or improve its efficiency so as to result in an annual saving of \$1,000 for that part.

2. To mechanize the conveyor system feeding the mohog saw by July 1, 1972 so that one man can operate it. Cost of equipment and installation not to exceed \$3,000.

3. To mechanize the washing system for the press transport screens by October 1, 1972. Equipment and installation cost not to exceed \$5,500.

4. To simplify the crating of the master unit for automotive board by August 1, 1972. Cost of research and equipment not to exceed \$2,000.

5. The 1971 objective for E & M expense ratio is 16.6% based on planned expense of \$390,000 to produce equipment estimated at \$2,350,000. This compares with an estimated expense of \$428,000 for 1970 or a \$38,000 reduction.

6. Organize my personal routine to permit spending less of my time with I.E.'s in discussion of their work, obtaining full time secretarial help by March 1. Reassign all nonexempt salary administration duties to my assistant by July 1. Eliminate or reassign routine or non-critical duties where possible throughout 1972.

7. Reduce design engineering and manufacturing cost ratio to total equipment and rebuild cost from present 17.1% to 15% by 1975 without reducing quality of design and manufacture of equipment.

8. Submit proposals for additional equipment in retooling department which will increase production of extrusion ingot by 15% by working with production department, submit designs and cost estimates to management by March 1. After approval, make detail drawings, requisition equipment by July 1. Coordinate installation of equipment, expedite construction for start-up by October 1.

9. Increase the operating divisions' efficiency and profits by a minimum of \$300,000 per year by 1975 with a superior advanced design, engineering development and manufacturing program for more versatile and economical new and replacement equipment.

10. Reduce costs of design tests on new equipment by 10%.

11. Reduce average cost of handling special equipment orders in engineering department by 20%.

12. Increase speed of handling special equipment orders in engineering department—20% average time reduction.
13. Improve estimating procedures so that actual costs do not exceed estimated costs by more than 5%.
14. Devise a cost control system with the objective of reducing present factory costs by 8%. The intent of this objective is the control of costs by application engineering design. Interim evaluation on July 10 and full evaluation on September 1.
15. Reduce engineering man-hours per million dollars of construction by 3 per cent.

For examples of other engineering objectives, see pages 44, 66, 82, 107, 139, 156, 162, 163, 164, 190, 193 and 194.

Tax Management

The performance of the tax manager is satisfactory when:

1. A complete calendar of all tax due dates is maintained and regularly utilized to insure prompt filing of returns and payment of taxes when due.
2. Necessary accounting and financial data are requested from the controller's or other departments three weeks prior to the due date of the return. (Federal return—30 days.)
3. Schedules requiring to be included in the returns are prepared and verified for complete accuracy five days before due date.
4. All recent developments in applicable law and legislation have been reviewed.
5. All figures used in the returns have been reconciled with corresponding company accounts.
6. Completed drafts or returns have been verified by two individuals.

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7. The returns and schedules have been typed and 100 per cent verified as to accuracy, and signed by the responsible officers or executives.

8. The completed return and remittance are mailed in ample time to be received by the due date.

9. Complete and accurate historical data respecting adjustments between tax and book figures are maintained in such a manner as to be readily available for reference.

10. Definite recommendations are made promptly in respect to all controversial tax issues as they arise.

11. Negotiations, conferences, protests and other activities connected with tax audits or controversies are conducted vigorously but with adherence to the highest ethical standards.

Purchasing

1. Achieve \$50,000 profit improvement through results of value analysis on all materials and equipment which company presently purchases in annual volumes of \$25,000 or more per major classification.

2. Effect a reduction of 2% in raw materials inventory and warehousing costs by arranging with suppliers to take delivery in smaller lots and by standardizing parts and equipment.

3. Insure company receives benefit of all services and warranties incident to purchases for each item costing more than \$5,000 per unit by preparing control records for services and warranties and auditing performance within periods specified in purchase agreement.

4. Realize profit improvement of \$11,000 through decreasing company money tied up by reducing inventory by 7% on high dollar maintenance supplies by September 30, 1972. (High dollar maintenance supplies are defined.)

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5. To create, make and hold orders on large dollar amount items thereby reducing inventory dollars by 2% by October 31, 1972.
6. To reduce inventory by 1% by elimination of spot purchase inventory and obsolete items by October 31, 1972.
7. Performance of the purchasing manager is satisfactory:
 - A. When stock turnover rate is within allowable limits which have been studied and set.
 - B. When indirect purchases, as such, are studied, and consistent improvement is shown.
 - C. When there is evidence of use of knowledge of markets, suppliers, prices, traffic control and supervision of incoming deliveries.
8. Reduce from three days to one day in 90% of cases the elapsed time between receipt of purchase requisition and issuing of purchase order for all Class 3, 7, 8 and 12 purchases.
9. Solve problem of undercapacity of company warehouses by contracting with outside warehousing companies for maximum periods of two years at a cost not to exceed present company warehousing costs and within a radius which will permit delivery to producing plants within eight hours of requesting.
10. By December 31, all key employees of the purchasing department to have approved objectives for 1972 and to be functioning under the company's management by objectives program.

For examples of other purchasing objectives, see pages 43, 178 and 190.

Quality Assurance

1. To reduce customers' claims due to quality defects from .27% of net sales to .20% of net sales during the fiscal year ending April 30, 1972.
2. To prepare product specifications on all board produced by the company by October 31, 1972. Such specifications to be prepared in a form to be inserted in our present "Technical Manual."
3. To reduce the dye cost of black board from \$15.00 to \$12.00 per thousand ft² (1/8" basis) by December 1, 1972, cost of research, new equipment and modification of present equipment not to exceed \$2,000.
4. Produce a set of up-to-date standard practices for filtering, fluxing, and grain refining of metal for FDC ingot, to be completed by end of third quarter by working out specific schedule with Ingot Metallurgist and Ingot Superintendent, so Ingot Superintendent will allow sufficient time for Metallurgist to complete job. Tentative schedule: Filtering—May 15, Fluxing—June 30, Grain refining—September 30.
5. Develop all necessary quality control tests for new Product B. Tests must be fast, must not require new instruments costing more than \$1,200 per line and must demonstrate plus or minus 2% correlation with specified performance characteristics.
6. Develop quality control test which within 14 hours will establish the free flow characteristics of Marking Paint as satisfactory for application at temperatures below 50 degrees in highway marking applications.
7. Recommend quality assurance specifications and inspection procedures which will permit detection of substandard product before a maximum of 5% of each batch has been produced.
8. Devise system of technical quality control to insure product and system design which will provide performance and reliability meeting established standards.

9. Develop recommended program for reducing warranty costs by 6% over average costs of past five years without reducing integrity of company's warranty policy.
10. Devise program for monitoring air pollution emissions from company plants in Atlanta and Pittsburgh to meet standards adopted by these cities.

For examples of other quality assurance objectives, see page 110.

Research and Development

1. Complete the integration of a numerical control system to a turret lathe and conduct performance tests by July 15, 1972.
2. Determine the cause of serious customer dissatisfaction with performance of No. 1 woven belting and develop improved formulation and/or process to correct deficiency within four months without adversely affecting other product characteristics and costs.
3. Reduce the cost of Product A raw materials by 2% through the development and use of lower cost materials having performance capabilities equal to present materials.
4. To complete research and turn over to operations the manufacturer of a smooth surface board by April 30, 1972. Additional chemical cost to be held to \$10 MSF. The cost of research, modification of present equipment and the addition of new equipment not to exceed \$7,200.
5. To complete research and have available for operations, by October 30, 1972, the utilization of chip screenings. The cost of such research and the equipment necessary to salvage such screenings not to exceed \$2,000.
6. To complete research and have available for operations, by June 30, 1972, the utilization of trim scrap. The

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cost of such research and the cost of chipping and conveyor equipment not to exceed \$6,200.

7. Complete start-up and stabilization of new ore recovery process.
8. Effect the approved 20% increase in professional staff with only an 8% increase in personnel costs.
9. To complete research and have available for operations by April 30, 1972, the utilization of our sawdust. The cost of such research and equipment not to exceed \$2,500.
10. Prepare instructions for final assembly and test of the prototype of a recently developed program controlled automatic turret lathe by May 1, 1972.
11. To reduce cost of dielectric resin to \$5.50 M square feet. The cost of such a program not to exceed \$5,000 including cost of research and any remodeling of existing equipment or purchase of new equipment.
12. To expand present research lab personnel and utilization (according to approved plan) before turning over new development and facilities to production department so that necessary personnel changes will not slow down research.
13. Complete research and development on P-2 program in manner which will permit a decision to be made regarding continuing or eliminating the program.
14. To establish procedure whereby response will be made to all Class A emergency service requests within 30 minutes of receipt.
15. Initiate by August 1 a procedure for the systematic evaluation of all new, competitive products for possible adoption by the company.
16. Reduce elapsed time for providing customer complaint analysis from present average of 2 weeks to an average of one week and a maximum of 11 days.

For examples of other research and development objectives, see pages 42, 79, 140, 157, and 159.

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Maintenance

1. With no increase in costs establish a procedure whereby all requests for help which involve interruptions to production are responded to within 20 minutes 80% of the time and the amount of deferrable work does not increase more than 10 per cent.
2. To present in writing to the general superintendent and have approved by May 1, 1971, a procedure and forms for scheduling maintenance (preventive and repair maintenance) to be effected during the fiscal year 1971-1972.
3. To hold mill downtime, attributable to maintenance department, to 4.5% of available production hours during fiscal year ending April 30, 1971 excluding scheduled shutdowns and plate changes.
4. To set up complete preventive maintenance program on the hardboard mill press and related equipment including hoists, pusher, extractors, plate feeding, valves, piping and pumps and to be presented in writing to the general superintendent and accepted, including costs, by November 1, 1971.
5. Reduce total annual preventive maintenance costs by 3% by better scheduling, improved utilization of personnel and costs of supplies.
6. To effect a modification and/or repair to reduce downtime at tipples section by 50% of average of fiscal 1971-1972 downtime. This is to be completed by August 1, 1972.
7. Performance of the maintenance manager is satisfactory when:
 - A. Pipeline maintenance labor cost is less than \$150 per year per mile of pipe maintained.
 - B. Pipeline maintenance material is less than \$140 per mile of pipe maintained.

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- C. Total pipeline maintenance cost is less than \$315 per year per mile of pipe maintained.
- D. Cost of pump and engine maintenance labor is less than \$125 per year per pump unit maintained.
- E. Cost of pump and engine repair material is less than \$220 per year per pump unit maintained.
- F. Total cost of pump and engine maintenance is less than \$335 per pump unit maintained.
- G. Pipeline maintenance is performed by no more than 4.25 maintenance employees per 100 miles of pipe maintained.
- H. Pump and engine maintenance is performed by no more than 1.75 mechanics per 100 pump units maintained.
- I. Cost of pump and engine repair material does not exceed \$10,000 per year per mechanic.
- J. Corrosion leaks do not exceed 35 per year per 100 miles of pipe operated.
8. Decrease average downtime by 5% in all cases classified as "Lack of Preventive Maintenance" during 1971 according to company's Downtime Reports.
9. Hire and have available for assignment two qualified zone engineers.
10. Reduce kiln maintenance costs by X per cent by more frequent inspection and repair.

Marketing Services

1. By June 1, complete "value analysis" of all accounts, determine minimum monthly volume profitable for company to make direct sales. Customers buying below this minimum to be serviced by brokers and distributors. By December 31, calculate effect of change on sales and cost of sales.
2. Reduce costs of point of sale materials by 35% by

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development and use of "shelf talkers" to replace racks and materials presently furnished by company.

3. Develop sales intelligence system to centralize collection and rapid interpretation of competitor's activity in new product introduction and withdrawal, changes in pricing and terms, test market activity and new market coverage. System must be capable of detecting and reporting these changes to vice president of sales within 4 days after announcing to trade.
4. Prepare and submit definitive report and recommendations re: costs and benefits of continuing marketing services personnel at division level versus having all services performed by headquarters.
5. Effect a minimum profit improvement of \$25,000 by eliminating "price off label" promotions and substituting local media promotion.
6. By March 10, recommend procedure for investigating and answering customer complaints so all written complaints are answered within 2 days if little or no investigation is required. Complaints involving investigation to be acknowledged on third day and follow-up reply made within an average of 7 days from date of receipt of complaint. Recommendation to include pros and cons of discontinuing practice of sending free samples to those complaining.
7. Recommend program whereby total advertising expenditures on company products can be increased by 50% and company's share of increase to be limited to 10% and the remaining 40% to be paid by franchisees through contributory cooperative program. Minimum of 75% of franchisees must participate.
8. The effectiveness of the company's advertising will improve in each succeeding year of the 1972-1976 time period. Achievement of this objective will have the following results:
 - A. Advertising expenditures promoting company products will decrease as a percentage of well

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service revenue from X% in 1972 to Y% in 1973.

- B. As indicated from surveys conducted at least once per year, recognition of the company, its products and services will improve on a year-to-year basis.
9. By February 20, select, design and structure three test markets for new cereal product.
10. Recommend franchise information system under which initial requests from applicants will be answered within 3 days of receipt, investigation completed within 10 additional days and personal visit with qualified applicants scheduled within 21 days of initial application. Cost of system not to exceed present costs for this activity.

For examples of other marketing services objectives, see page 109.

Data Processing

1. Achieve average machine utilization of 87 per cent during 1972.
2. Make machine application of all monthly subscriber lists by September 15 including system for detecting and reporting mailing errors by class to circulation department manager within eight days of mailing.
3. Performance is satisfactory when no hardware or costs are recommended without first presenting:
 - A. A determination of company's data processing needs for next five and ten year periods.
 - B. A comprehensive analysis of capital required, operating and maintenance costs and useful life of equipment.
 - C. A determination of equipment and personnel capabilities in light of present and/or new equipment, and company's needs.

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- D. All equipment realizes a plus or minus 5 per cent of expectation.
4. To reduce by \$56,000 cost of payroll preparation by machine accounting.
 5. Determine and recommend point at which it becomes more economical to have nonrecurring work done by outside service bureau versus "in-house."
 6. During each of next three years, cross-train and have available minimum of three key punch operators qualified as junior programmers.
 7. Develop method for evaluating cost, percentage machine utilization, and actual performance versus estimates for all applications costing in excess of \$10,000 per year.
 8. Submit recommendation by April 10 on performance and cost feasibility of installing IBM 360-30 system compared with same for contracting for similar work done by outside organization.
 9. Consolidate at New York Center all data processing operations presently located in Pittsburgh, Atlanta and St. Louis and reduce total annual costs by \$122,000 with no delay in operations reports.
 10. In 1972, 1973, and 1974, contract with outside organizations to utilize an average of 90 per cent of excess machine time on basis of out of pocket expenses.

For examples of other data processing objectives, see pages 40 and 138.

Personnel

1. Research, recommend and develop a total management system, integrating the best of management by objectives and accountability management incorporating a performance appraisal system supporting the salary administration program. Due 8/1/72.
2. Determine need, formulate a plan and secure management

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- ment approval (by May 1, 1972) for benefits communication program.
3. Develop and publish booklet explaining college relations program and management trainee program by October 1, 1972.
4. By January 1, 1972, without exceeding present costs, reallocate space in monthly house organ to achieve average monthly coverage as follows:

Product news	—	10%
General company news	—	32%
Benefits education	—	12%
Process and technical articles	—	12%
Employee personals	—	25%
Community service	—	7%
Boilerplate	—	2%
5. Finish and distribute to all supervisors above Grade 6, manual of all approved personnel policies. Due October 1.
6. Publish and distribute by June 16, manual describing nature and extent of safety hazards, and their 1971 costs, for all accidents exceeding 3 lost man-days per month in 1971; manual to include preventive procedures for each accident.
7. Limit company subsidy of cafeteria to \$0.28 per meal and total annual cost of \$14,000 without reducing present choice of three entrees at every feeding.
8. Implement first phase of approved long range plan for employee relations and communications. Complete by August 1.
9. Conclude training and have designated replacement ready for replacing me by December 31. By September 1, have ready and announce replacement. From September 1 to December 31, replacement to direct department on fullfledged basis with all personnel reporting to him; only replacement will report to me and only when necessary for guidance or information.

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10. By August 1, develop, recommend and implement uniform standards and procedures for selection of candidates for management development courses, graduate schools, multicompartment course, and other conferences and seminars in management education.

11. Conduct an employee opinion survey of all salaried employees in second quarter, provide direction to follow-up efforts. Work with New York office staff and local department heads in formulating questions for survey. Assist works manager in proper communication efforts prior to survey. Arrange for survey to be conducted in mid-April, and for report-back meetings to begin within six weeks following survey. By verbal and written means, be sure all departments are conducting appropriate follow-up activities, as agreed upon with works manager.

12. Hold lost-time accidents to 9 and reportable injuries to 38 during fiscal year ending April 30, 1972. This to be accomplished through safety awareness program, cost of which is not to exceed \$3,000.

For examples of other personnel objectives, see pages 44, 76, 105, 131, 159, 160, 171, 175, 190 and 196.

Public Relations

1. Achieve national recognition for company's anti-pollution activities in West Virginia-Kentucky Region. Goal will be achieved if company is not linked with area pollution in more than two separate published instances and is included in at least four published instances portraying the company as a pollution fighter.

2. Implement financial press relations program which will result in:

- A. President and/or senior officers appearing before security analysts meeting at least four times.
- B. Procedure established whereby all inquiries from

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financial press representatives are routed to designated persons and acknowledged within a maximum of 24 hours.

C. Procedure implemented to update information on company in financial writer's morgues which results in factual information about company being current and correct in at least 80% of published articles.

3. By 1972, the company will have a national image of a well managed, aggressive growth company. Achievement of this objective is based on the following results:

A. The company will be correctly identified by at least 50% of a national sample of investors by year end 1974.

B. At least two favorable articles will appear in national publications of the stature of FORTUNE, BUSINESS WEEK, FORBES, BARRON'S or equivalent of the preceding.

C. The company will be favorably mentioned in at least 75% of articles on industries in which the company is an active participant.

D. Good people will be eager to join the company. This result will be measured by comparison of the qualifications of new hires compared with the qualifications of existing employees holding equivalent positions in the company.

4. Reduce total annual cost of customer entertainment by 20 per cent and cost per individual from 1971 average of \$22.75 to \$20 without loss in customer satisfaction or goodwill.

5. Performance of the public relations manager is satisfactory when:

A. At least two planned visits per year are made to operating offices of other competitive companies in the area.

B. At least one visit per year is made with municipal officials in the area.

C. At least one presentation is made each year to local schools.

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- D. At least two stories pertaining to the company are carried by local newspapers each year.
6. By September 1, determine direct and indirect value to company of "Miss Sunshine" promotion activities and recommend go or no go decision on program and costs. In event of "no go" decision, recommendation to include means and schedule for phasing out program with least impact on sales.
7. Increase employee readership of company house organ from 30 to 55% as measured by annual readership survey.
8. The price/earnings ratio of the company's common stock will increase from 11-13 year end 1971 to over 16 by year end 1972. Based on the planned increase in earnings per share in the 1970-1972 time period, achievement of this objective will result in an increase in valuation from approximately X per share in 1970 to over X + Y per share in 1972.
9. Develop and market at least two self-liquidating premiums which result in minimum responses of 32%.
10. Achieve 50-50 balance between institutional and product publicity in terms of costs, staff time expended and coverage received.

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Chapter X

PLANS TO SUPPORT OBJECTIVES

Plans are an indispensable component of the MBO system as they contain the detailed, step by step, approach by which the manager will approach the achievement of his objectives. Plans are the component which brings realism to the objectives and to the entire MBO system. As an illustration, assume a safety manager states he is going to lower injury costs by \$50,000. Several questions arise immediately. Is this a realistic objective? Can he accomplish it? How does he know the figure is \$50,000 instead of \$25,000 or \$60,000? In addition to the cost reduction, what other ramifications will be involved? What departments and personnel will be concerned? What problems are involved? What changes will occur in operating methods and procedures? Does he have the necessary responsibility and authority? Will capital expenditures be necessary? The questions can be answered only by exploring HOW he will accomplish the objective. The plans of action which the manager prepares to support his objectives must explain the HOW.

Following is a simplified action plan to support the objective of an office services manager:

Objective: Reduce by \$12,000 the cost of operating the office services division. (The objective tells WHAT.)

Plans: (The plans tell HOW.)

1. Install an automatic sorting and envelope stuffing machine at an annual cost of \$2,000 to replace two employees with total costs of \$9,000. Machine to be operational by January 31 and employees terminated on February 6.

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2. Reduce the cost of shareholder mailing material by \$3,000 by changing from three color printing to black and white. Change to become effective January 1, 1972.
3. Beginning on July 1, reduce the total cost of recruiting clerical personnel by \$4,000 by requiring applicants to pay their own fees to employment agencies. Savings are based on hiring an average of 40 employees times agency fees of \$100 per employee hired.

The office services manager now has stated what he is going to accomplish and how he is going to proceed. The questions posed in the preceding paragraph may be explored and answered.

Purpose of Plans

Several purposes are served by well-drawn plans. First, they provide a basis for evaluating whether or not the objective is realistic and attainable. Secondly, plans permit the necessary, advance coordination to be effected among all other managers who may be involved. Lastly, once approved, plans constitute a road map for the manager to follow to his destination—a road which helps him avoid detours, bumpy roads and obstructions.

Evaluating Realism—Unless the manager supports each of his objectives with specific plans, it is not possible for the manager, his superior, or other managers to determine whether or not the objective is realistic and attainable; the MBO system cannot operate with objectives which lack these two qualities.

Once the manager has written his detailed plans both the manager and his superior are in possession of the data both require to test the objective for realism. For example, in the preceding objective for the office services manager, the detailed plans tell how he is going to save the total of \$12,000.

The manager and his superior then can determine whether it is possible to install the automatic sorting machine and whether it will replace two employees, whether it is possible and desirable to switch from the three color process to black and white, and whether it is feasible to have newly recruited employees pay for their own employment agency fees.

Objectives should not be given final approval until they have been subjected to a penetrating financial analysis. Once again, the detailed plans make it possible for the financial analysis to be completed. When analyzing the plans, the competent analyst will determine whether the office services manager has taken into consideration all pertinent aspects of capital expenditures, depreciation expense, maintenance costs and other key components which will have an impact on the projected savings. Lastly, the analyst must determine whether or not the objective, if achieved according to plan, will result in the actual savings anticipated. He cannot carry out his assignment without the comprehensive plans which support the objective.

The importance of well-drawn plans when evaluating objectives for realism is illustrated further by the case of the marketing services manager who states that a 10% increase in sales will be achieved in 1972. The plans should permit this premise to be tested in light of past sales performance and the performance of competitors—among other tests. Past performance is a useful test if used properly. Proper use includes the realization that what a company did in the past need not necessarily govern what it does in the future. Nevertheless, the sales increase provided for by the objective should be analyzed in view of past sales accomplishments. The evaluation for realism consists of resolving any major differences between proposed performance and the performance which the company has been able to achieve in the past.

In the case in point, the company's proposed profit plan for next year provides for an increase in sales of 10 per cent over the current year even though a sales increase of this

magnitude has never been achieved in the past ten years. In fact, the actual growth rate has been 3 per cent. Such a set of circumstances raises a red flag. How can the company expect to more than triple its sales growth rate in one year over the rate enjoyed in past years? It is the resolving of this major difference which provides the test of reasonableness. What factors or advantages does the proposed plan have which were not present in previous years and which would justify the dramatic increase in sales? Are these factors of such magnitude as to justify the full 10 per cent growth rate, or should the growth target be lowered to something in between the historical 3 per cent and the proposed 10 per cent? If an adjustment is indicated, what rate can be justified? The plans must justify the rate decided upon.

Competitive data can be used as another indicator of the reasonableness of a manager's plans to reach his objectives.

The word "indicator" is used advisedly, as a competitor's performance need not necessarily act as a limitation. However, like historical comparisons, the resolving of any major differences between the objectives in one company's plans and those usually achieved by other companies in the same endeavor will assist in determining reasonableness. For example, if the marketing services manager projects a sales increase of 10% and all available data indicate other companies selling the same product realize an increase of only 5%, the company is on notice that it is projecting sales which would set an industry record. Does this company have unique benefits—above those of competition—which would justify such a projection? Determining whether these unique differences are present and, if they are, the degree to which they exert an impact on sales constitutes the test of reasonableness in this case.

Most companies make extensive use of ratios when comparing planned performance with historical or competitive performance. Ratios provide a quick, readily understood comparison which precludes the necessity for managers to pore over great quantities of figures and other data. If a ratio appears out of line, an investigation is in order to

determine why. It is not uncommon for a company to use anywhere from 25 to 100 different ratios when testing the reasonableness of its plans. Some of the more important of these ratios include profit on sales, return on investment, manufacturing costs to sales, materials cost to sales, subsidiary profit to sales before interest and general office overhead, and investment per dollar of sales.

Unless the manager supports his objectives with concrete plans to accomplish them he cuts himself off from all of these aids designed to help him establish realistic objectives.

Effecting Coordination—A singular feature of a well run MBO system is that it facilitates the advance coordination of all of the major efforts which the organization will be undertaking in the future. MBO cannot fulfill this role without concrete plans which permit all managers involved in an objective, or who may be affected by the objective, to know precisely all of the ramifications which the objective may bring about.

The company's other managers probably don't get excited when the office services manager announces his objective of saving \$12,000 per year—they can't know that their operations may be involved by the objective. But, these same managers may get highly excited when they learn of the manner in which the objective is going to be accomplished. The labor relations manager who is in the midst of an organizing drive by a clerical union might well champion the postponing of the replacement of clerical personnel by the automatic sorter on the premise such action could be construed as anti-union activity. The corporate secretary in charge of shareholder relations and the public relations manager in charge of financial relations may view the switching from three color to black and white as downgrading the company's shareholder and financial relations programs. Because of a tight labor market for clerical employees, the managers for whom recruiting will be done may believe that costly delays in recruiting and hiring of much needed personnel will follow when the company quits paying fees to the employment

agencies. All of these questions and disagreements must be discussed and threshed out (coordinated) before the objective is approved.

Assume that the objective and plans of the office services manager are approved after all deliberations have terminated. An announcement to this effect is made to each of the managers involved. These managers, being familiar with the plans of the office services manager, can lay their own plans for coping with the problems which may arise. Thus, complete coordination has been effected and effected before, not after, the fact.

Road Map—Without his plans, the office services manager would be forced to begin the target year accountable for an objective to save \$12,000 but without any path to follow for making the savings. While he might be alert to opportunities as they developed, making a saving here and another there, his approach undoubtedly would be slipshod with no real promise of achieving his objective. This approach is in marked contrast with one in which he has developed his plans before the year began, only leaving him with the task of following the agreed upon path and making any adjustments to his plans necessitated by changing circumstances. His plans have transformed a hit or miss approach into a methodical, concerted one.

Examples of Plans

The following three examples set forth the objectives and supporting plans for four staff managers in charge of a management information system, data processing, design engineering and research. These are presented in out-line form which includes the key subject points for each part of the plan. The elaboration which should accompany each phase of the plans has been omitted for brevity.

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Management Information System

This manager is accountable for revising the company's management information system to render it more effective for use by managers before and at the time the decisions are made and, secondly, to permit them to monitor the effectiveness of their decisions after they have been made and are being carried out. Therefore, the substantive part of his objective is "to provide a more effective management information system that will meet the needs of management by June 30, 1972."

His plans provide:

- A. To formulate the elements of the Management Information System by August 31, 1971.
 1. Identify management information needs that the system must satisfy by June 30, 1971.
 - a. Controller and other persons he will specify to attend division seminars covering their operations by June 30, 1971.
 - b. Controller or person he shall designate to attend at least one MIS seminar by June 30, 1971.
 - c. By April 30, 1971, the Controller will prepare a standard approach to be followed in meetings with all managers.
 - d. Controller and his staff will schedule and hold meetings with operating managers by June 30, 1971.
 - e. A follow-up letter summarizing the results of each meeting will be sent to those attending.
 2. The Controller will analyze findings from phase 1 above and prepare preliminary plans to meet information needs by July 31, 1971. The plans shall include changes to the chart of accounts,

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computer programs to be changed, output-report data requirements, timing and format, and additional source data needed.

3. The Controller will present a summary of information needs and preliminary plans to division managers and the executive office for review and approval by August 31, 1971.

B. To design and implement the management information system by June 30, 1972.

1. The data processing manager will complete the final design and implementation of the Management Information System as reflected in the Data Processing goal.

Data Processing

This manager's objective requires him to upgrade the data processing function by June 30, 1972. This objective will be satisfied when the following conditions exist:

- A. All accounting systems have been revised to meet current needs and reprogrammed in COBOL.
- B. All programs are fully documented to include:

1. Systems Diagrams
2. Flow Diagrams
3. System and Program Descriptions
4. Input/Output formats
5. Operations Instructions

The following plans will be executed:

1. Execute the proposed contract with ABC Computing Company whereby it provides computer hardware and programming support at a cost of \$10,400 per month. Contract is to be effective March 1, 1971.
2. Terminate company programming staff as of March 1, 1971.
3. Notify present equipment company of agreement with ABC and termination of equipment rental by February 28, 1971.

4. Review all systems with ABC and the primary company user by April 1, 1971.

5. Analyze present accounting systems by April 15, 1971, and determine which routines will not require modifications. (Routines not requiring modification will be referred to as Category I routines.)

6. Schedule conversion of Category I routines by May 1, 1971.

7. Analyze those routines which do require modification and define the changes by August 31, 1971, including changes identified from the Management Information System objective. (Routines requiring changes will be referred to as Category II routines.)

8. Schedule conversion of the Category II routines by September 15, 1971.

9. Complete conversion of accounting systems by March 31, 1972.

10. Complete testing of new systems and run new Management Information Reports by June 30, 1972.

Design Engineering

The responsibility of this design engineer is to improve operations or effect cost reductions through more advanced design engineering applications. His objective in this particular instance is to design multipurpose equipment which will eliminate a minimum of three tractors or XYZ dollars in capital expenditures during 1972. The plans for accomplishing this objective are:

Feasibility studies and preliminary plans are now in process and will be finalized by January, 1972. These plans indicate the design and manufacture of a minimum of four combination AB tractor units for the operating division during 1972. The combination units will have all the pumping capabilities of the present equipment and will be designed and manufactured for an estimated cost of X compared to the past cost of X plus Y for a regular tractor.

In addition to the combination unit having the same pumping capabilities as the present equipment, the truck will contain a fifth wheel so that it can legally pull a 3,000 gallon semi-trailer, thus, eliminating an extra tractor. If the operating division so desires, the combination unit can be assembled without its own 1,000 gallon tank and then be capable of legally pulling a 4,000 gallon semi-trailer. Preliminary studies indicate a need in the future of both types of equipment in the operating division.

There are other possible semi-trailer units which may be used with the proposed equipment such as materials trailers, equipment trailers, etc. Feasibility studies will be made on these and other possibilities during 1972.

It is recognized that all of the division's auxiliary tractors cannot be eliminated with the use of multipurpose equipment; however, it is predicted that from 60 to 70% of the tractors now pulling materials and equipment trailers can be eliminated from the fleet.

A minimum of four of the new combination tractors are scheduled in the last half of 1972. In addition to reducing the operating divisions' capital expenditures, some reduction in labor costs for the division should be realized with the use of these new units.

It is recognized that this objective is a joint or dual objective of both the design engineering department and the operating division, and the final authority and responsibility for reduction of tractors from the fleet rests with the operating division.

Research

The objective of this manager of research requires him to "develop at least one unique product, process, or system by December 1, 1971, which can be developed into an additional or adjunct product or service." To be "unique", the result must meet the following conditions:

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1. It is first introduced by the company ahead of competition.
2. It enhances the image of the company as a technical innovator.
3. It is technically promotable through articles, seminars, advertising and the like.
4. It produces a significant sales impact.

The research manager will work toward his objectives according to the following plans:

- A. Conduct research on approved long range projects.
 1. All approved research projects will be prepared in a program format with a detailed breakdown of the technical objective and approach to be used, responsible team leader, program time phasing (including alternatives), and cost/estimate.
 2. To insure creative approaches to project solutions the following procedures will be utilized:
 - a. All project teams will have at least two unrelated technical disciplines represented (e.g. chemists and engineers on acid programs).
 - b. Multiple assignments will be given so a man is responsible for several projects thus achieving the stimulation that changing gears can provide.
 - c. An open atmosphere of idea sharing is maintained through team as well as individual recognition and encouragement of multiple authors on patents and publications.
- B. Generate new concepts through:
 1. Detailed review sessions of technical articles with division technical administration to be held the first Monday of every quarter.
 2. Monthly brainstorm sessions of current field problems uncovered during field visits.
 3. Visit two industry company contacts and one industry company research laboratory per quarter to gain insight into their problems and research projects.

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undertake to prepare a list of available alternatives. Usually, it follows that the higher up a manager is in the organization the greater will be the number of these alternatives. This usually results from the previously discussed point that higher-level managers are usually responsible for planning activities, while lower level managers are more concerned with operational details and the carrying out of the plans.

"The road to maximizing profits is seldom a one route affair. Generally, maximum benefits result from putting together a combination of routes or alternative methods of improvement. As a result, the proper use of alternatives plays a key role in the planning process.

"Used properly, alternatives serve two purposes. First, they help insure that all possible ways of increasing effectiveness have been considered; and, once this is done, they help the company select those alternatives which hold the most potential. Exploring all possible alternatives helps keep the manager from succumbing to the human tendency to lock in on one pursuit and ignore other avenues which may in fact have more promise than the one he selected.

"For example, the production planning manager of one company believed the better way to schedule production was to spread the company's limited production rather evenly throughout the year and keep all regular employees working for a few hours each day rather than working them for a few weeks and then laying them off. By doing so, he would avoid overtime as well as the costly recruiting and training of new employees. In many ways, his position was difficult to fault until other alternatives were considered. However, when the alternatives were explored a different picture emerged. By concentrating its own production during a few periods of the year, the company was able to do private-label packing for other companies. Thus, it could realize better utilization of its plant and equipment, spread other fixed costs over a greater number of production units, and still have production time remaining for any new products it might develop. By weighing the alternatives and adopting the second one, the company was able to increase its con-

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- C. The concepts generated in Item B. will be briefly researched and their technical feasibility will be determined through literature reviews and limited laboratory testing. Those concepts which are feasible and meet our criteria for a unique item will be proposed to the technical administrator for potential inclusion in the 1971-1972 research program. At least one concept will be proposed per quarter and at least two patents will be applied for during 1971.
- D. All concepts proposed by research will be ranked according to priority and funded if budgets permit.
- E. This procedure will insure a continuing flow of research ideas and will supply continuity of research projects from year to year.

MEASURES BY QUARTERS

Objectives	1st 85%	2nd 85%	3rd 85%	4th 85%
A. Conduct Research on Schedule	0	0	0	1
B. Product/Process System Developed	3	3	3	3
C. Number of Review Meetings With Technical Administrator	2	2	2	2
D. Meetings with Industry Company Representative	1	1	1	1
E. New Research Concepts Proposed	0	1	0	1
F. Patents Applied for	\$XYZ	\$XYZ	\$XYZ	\$XYZ
G. Budget				

After the manager has been made thoroughly familiar with the company's long range and overall plans, he must

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solidated profit. Thus the basic chore which must be faced by every manager engaged in profit planning is twofold: (1) to insure that he has considered every alternative available to him; (2) to weigh each one and select those which are practical and will result in the highest rate of return consistent with the company's overall objectives."¹

The staff manager, just like the line manager, has a certain amount of company investment for which he is accountable. Although this investment usually takes the form of the expenses which he incurs in carrying out his function, rather than capital equipment which usually forms the bulk of the line manager's investment, it is an investment nevertheless. The higher the rate of return which the staff manager earns on this investment, the greater will be his contribution to the organization. Therefore, the staff manager must select and weigh every possible alternative for increasing this rate of return.

There are sound reasons for having the manager list and comment briefly on the alternatives which he considered but rejected. A good example is the manager who didn't proceed with a potentially profitable alternative because he believed sufficient funds weren't available to implement the alternative. However, he did list the alternative in his plans and included the note that he had rejected the alternative because of the lack of availability of funds. When reviewing this manager's plans the financial analyst noted the reason for rejecting the alternative and because of the potential involved means were worked out whereby the funds could be made available. It is entirely possible the financial analyst would never have known that the alternative was available if the manager had not listed it in his plans. The manager who lists the rejected alternatives makes it possible for all managers who will review his plans to help him increase his return on investment. Examples of the method for listing and briefly describing rejected alternatives are given on page 164.

1. Dale D. McConkey, *PLANNING NEXT YEARS PROFITS*, American Management Association, 1968, pp. 68-69.